Monthly Oversight Report 61
44728 AES *[46526 RAC]*
ACS NPL Site
Griffith, Indiana
December 31, 2005 – February 3, 2006

BLACK & VEATCH

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Black & Veatch Special Projects Corp.

USEPA/AES
American Chemical Service, Inc. RAO (0057-ROBE-05J7)

BVSPC Project 44728
BVSPC File C.3
February 15, 2006

Mr. Kevin Adler
U.S. Environmental Protection Agency
77 W. Jackson Boulevard (SR-6J)
Chicago, Illinois 60604-3590

Subject: Monthly Oversight Summary Report No. 61 for January 2006

Dear Mr. Adler:

Enclosed is the Monthly Oversight Summary Report No. 61 for January 2006 for the American Chemical Service, Inc. Superfund Site in Griffith, Indiana.

If you have any questions, please call (312-683-7856) or email (campbelllm@bv.com).

Sincerely,

BLACK & VEATCH Special Projects Corp.

Larry M. Campbell

Larry M. Campbell, P.E.
Site Manager

Enclosure

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Monthly Oversight Summary Report No. 61
ACS Superfund Site
TO 057, 44728.238 (AES) *[WA57, 46526.238 (RAC)]*

Reporting Period: Month of January (December 31 – February 3, 2006)
BVSPC O/S Dates: January 9, 2006 (Mr. Campbell)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	3	Respondent's General Contractor
U.S. Environmental Protection Agency	1	Federal Regulatory Agency
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
United/Anco Services	2	Scaffolding Contractor
Vidimos	1	Specialty Welding Contractor
Austgen	1	General Contractor
Microbac	1	GWTP Sampling Contractor

Construction Activities

Major Activities:

- Montgomery Watson Harza continued operating the groundwater treatment plant, the in-situ soil vapor extraction systems, and the air sparge systems.
- Montgomery Watson Harza completed testing of the Still Bottoms Pond Area Insitu Soil Vapor Extraction System upgrades to inject air into the Still Bottoms Pond Area.
- Microbac collected samples from the groundwater treatment plant for routine process monitoring.
- Montgomery Watson Harza held an operation and maintenance meeting on January 13.

Activities Performed:

Montgomery Watson Harza (MWH) reported (February 7) that the groundwater treatment plant (GWTP) was operational 96% of the time (645 of 672 hours) in January, processing 899,488 gallons of groundwater at average rates of 25 to 40 gpm. MWH reported that groundwater was pumped to the plant from all trench and well sources. Microbac collected samples from the GWTP for routine process monitoring.

MWH reported that a night-time high-level alarm in the activated sludge tank caused a shut down of the GWTP for about 12 hours. The problem was identified and promptly fixed and the GWTP was returned to operation.

MWH continued to operate the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) and Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) systems and the OFCA and SBPA air sparge systems, processing vapors through thermal oxidizer units 1 and 2 (thermox 1 and 2).

MWH reported that thermox 1 operated for 57% of the time (381 of the 672 hours) in January, processing 1,000 cfm of vapors from the ONCA SBPA ISVE system, collecting vapors from 30of the 46 ISVE wells. Vapor extraction well SVE-80 was brought online on January 9.

MWH reported that thermox 2 operated for 92% of the time (620 of the 672 hours) in January, processing 2,000 cfm of vapors collected from all 42 OFCA ISVE wells and aeration tank T102. Thermox 2 was shut down for a few hours while repairs were being made to the thermox 1 scrubber. MWH reported that several sheared bolts in the thermox 2 scrubber quench section were replaced during the shutdown.

MWH reported that it pumped 37 gallons of free product from six ISVE wells in the SBPA on January 6. Based on the weekly pumping of these six wells in December, MWH concluded that weekly pumping from five of these wells is not warranted because of the low production of only 1 to 2 gallons per well per week.

However, well DPE-61 consistently produced more than 20 gallons of product each week. MWH reported that it planned to install a dedicated product recovery pump in well DPE-61. MWH reported that it will perform additional product recovery testing of wells SVE-53, 72, and 65. If warranted, dedicated product recovery pumps may be installed in these wells.

MWH started testing the SBPA ISVE air injection system in the November 2005 reporting period and was able to inject air into 15 of the planned 18 wells. Air could not be injected into SVE-60, -66 and -83. Additional testing was performed on January 9.

MWH reported that in January, air was being injected through a group of five wells (SVE-50, -54, -73, -79, and -81), each flowing at about 20 cfm. MWH reported that air will be injected using this Group 1 set of wells through February, after which air will be injected using a second (and subsequently, a third) group of five wells.

MWH reported during the January testing that after air injection began VOC concentrations for most ISVE extraction wells increased substantially above the historical concentrations in vapor extracted before air injection began. The concentrations increased from <100 ppm (without air injection) to more than 9,999 ppm (the upper range of the PID)(with air injection).

MWH reported that the air injections are successfully mobilizing additional subsurface contaminants for extraction and destruction.

MWH reported that blower ME-102 (that provides air to the activated sludge tank and is enclosed in a noise suppression housing) failed. MWH reported it had ordered a new blower and motor but delivery time is 12 to 16 weeks. In the meantime, air is being supplied to the activated sludge tank using blower ME-103, but the noise-suppression housing has not been relocated over ME-103.

MWH reported that it would inform Mr. Howard Anderson (local resident who had filed a noise complaint) that ME-103 was running without the noise-suppression housing.

MWH reported that it is considering replacing the main 30 HP piston air compressor at the GWTP with a 40 HP rotary screw air compressor.

MWH reported that ACS had not reported a recurrence of odors in its break room on the SBPA.

MWH conducted an operations and maintenance (O&M) meeting at its Chicago office on Janury 13. BVSPC attended this meeting.

Because of the lack of field activity, weekly reports are not attached. Weekly reports will be prepared in the future if there are sufficient field activities to warrant such reporting. However, correspondence, log book notes and photographs of the daily activities are attached. BVSPC conducted oversight of the field activities on January 9.

Topics of Concern: None

Concern Resolution: None

Upcoming Activities:

- MWH to continue operating the GWTP and the OFCA and ONCA SBPA ISVE and air sparge systems.
- MWH to continue operating Group 1 air injection wells in the SBPA.
- MWH to monitor odors in the ACS break room.
- MWH to continue pumping product from selected ONCA SBPA dual phase extraction wells.
- MWH will continue weekly construction coordination meetings at the site when field activities warrant such meetings.
- MWH will continue monthly O&M meetings to report on operation of active treatment systems.

Signature: Larry Campbell   Date: February 15, 2006

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SITE STATUS MEETING MINUTES
FOR JANUARY 13, 2006 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA

MEETING DATE: Friday, January 13, 2006

MEETING TIME: 10:00 a.m.

MEETING LOCATION: MWH Chicago Office

ATTENDEES:
Kevin Adler – U.S. EPA (via phone)
Larry Campbell – Black & Veatch
Amy Clore – MWH
Chris Daly – MWH
Justin Finger - MWH
Todd Lewis – MWH (via phone)
Lee Orosz – MWH (via phone)
Jonathan Pohl - MWH
David Powers - MWH
Peter Vagt – MWH

TOPICS:

SITE STATUS

General Site Health and Safety

There have been no health and safety incidents since the last meeting held on December 9th. One situation of concern involves work on Thermal Oxidizer 1 (ThermOx 1). Several pinhole leaks have been noticed in the scrubber, and they need to be repaired. Since some of the holes are high off the ground, an OSHA-approved scaffold must be built to give workers access. United/Anco Services, Inc. of Griffith, Indiana has been contracted to build the scaffold. As a precaution, Thermal Oxidizer 2 (ThermOx 2) has been shut off while the repairs are made, due to its proximity to ThermOx 1.

Tailgate safety meetings have been performed daily during the past month, prior to beginning activities associated with the treatment plant maintenance and ThermOx 1 repairs.

Groundwater Treatment Plant (GWTP) Status

The GWTP ran 99% throughout the month of December (30.5 out of 31 days). In November 2005, blower ME-102 associated with the Activated Sludge Plant failed. A new blower was ordered but will take 12-16 weeks to arrive. Delivery is anticipated in March 2006. Blower ME-103 is operating in the meantime. However, at this time, the noise abatement housing that was installed around ME-102 will not be moved to ME-103.

MWH is evaluating the need to replace the main air compressor at the GWTP. The existing air compressor is aging and has required increased maintenance.

Off-Site Area/SBPA ISVE Systems
The SBPA ISVE system was operational 95 percent of the time during December (29.5 out of 31 days), and the Off-Site ISVE system was operational 97 percent of the time during December (30 out of 31 days).

Maintenance activities were performed on both thermal oxidizer systems. ThermOx 1 was shut down on January 10th to allow pinhole leaks on the scrubber's quench section to be repaired. The system is anticipated to be restarted on January 16th. On the ThermOx 2 scrubber, several bolts on the quench section were replaced. The existing bolts had severely corroded.

MWH is working with an alloy supplier to evaluate the effects of the ISVE vapor streams on various Hastelloy alloys. A rack of six alloys has been inserted into the piping of ThermOx 1. After a period of three months, the rack will be removed and the extent of corrosion of each alloy will be evaluated.

Routine maintenance was performed on the two air compressors associated with the Off-Site and SBPA Air Sparge Systems in December.

Free product removal activities were conducted for five consecutive weeks, beginning the week of December 5th in six wells (SVE-52, SVE-53, SVE-62, SVE-72, SVE-88, and DPE-61). During this time, product recovery rates were observed, and it was determined that product removal does not need to occur on a weekly basis at each location with the possible exception of well DPE-61. DPE-61, unlike the other five wells, did not show a decrease in free product levels. It consistently produced over 20 gallons of free product each week. MWH is currently determining the future schedule for product removal, and the possibility of installing permanent pumps for product removal.

ISVE System Upgrades
Five air injection wells are currently running at the ACS facility (SVE-50, SVE-54, SVE-73, SVE-79, and SVE-81). MWH was on site on January 9th to bring SVE-79 online as the fifth air injection well. MWH plans to rotate the air injection between three groups of five wells on a monthly basis. When a well is not operating as an air injection well, it will be switched to operate as a vapor extraction well. MWH is currently preparing a summary of the SBPA ISVE System Upgrades Startup that will be submitted to the Agencies in January 2006.

Interaction with ACS Facility and Community
MWH has contacted ACS facility personnel to explain the changes that have been made to the SBPA ISVE System. Since the system now incorporates injection of air into several locations (in addition to the air sparge points), the facility personnel should be

aware of the modifications to the system. Since the SBPA ISVE System Upgrades have been started in November, ACS personnel have not reported any leaks around the facility or any odors in the break room.

Due to the malfunction of Blower ME-102 at the GWTP, a replacement blower has been ordered and is anticipated to be delivered in March 2006. Blower ME-103 will be operated in the interim. Unlike Blower ME-102, Blower ME-103 is not housed in a blower shed. MWH will call Howard Anderson (local resident who previously had commented on excessive noise at the GWTP) to explain the situation and to assess whether action needs to be taken to mitigate noise problems in the interim period. MWH will inform Mr. Anderson that the new blower, inside the sound baffling, will be completed before spring.

LOOK AHEAD

Field Events

- SBPA ISVE System Monitoring – January 24th

Reports

- Monthly Status Report – January 10, 2006
- Lower Aquifer Investigation Report – February 2006
- Chemical Oxidation Summary Report – February 2006
- Quarterly Report, 3rd Quarter 2005 – January 2006
- Summary of SBPA ISVE System Upgrades Startup – January 2006
- U.S. EPA 5-Year Report Assistance – January 2006

Health & Safety Look Ahead

- Proper precautions should be taken to avoid slips, trips, and fall associated with the winter weather.
- Appropriate procedures should be followed while performing repairs to the ThermOx 1 scrubber.

Future Meetings

- Monthly Site Status Meeting – Thursday, February 9, 2006, 10 a.m. at MWH Chicago office.

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Remedial Progress Report	January-06		Report Date: 2/7/2006

GWTP & Dewatering

The GWTP was operational for 645 hours out of 672 in January (12/30/05-1/27/06).
Total Gallons treated = 899,488 gallons since 12/30/05 (28 days)

Tables, Graphs & Figures
Table - Effluent Summary
Graphs - Off-Site Dewatering
Graphs - SBPA Dewatering

SBPA ISVE System

System was operational 381 out of 672 hours in January.
System monitoring was conducted on 1/24/06.
The next monitoring event is scheduled for 2/21/06.

Tables, Graphs & Figures
Table - Sampling Data
Graph - Mass Extraction
Graph - Total VOC Removal

Product Removal

	01/06/06
SVE-52	1 gal.
SVE-53	5 gal.
SVE-62	1 gal.
SVE-72	4 gal.
SVE-88	1 gal.
DPE 61	25 gal.

Air Injection

Wells
SVE-50
SVE-54
SVE-73
SVE-79
SVE-81

Air injection well SVE-79 and vapor extraction well SVE-80 were brought online on 1/9/06.

Active Extraction Wells (30 of 46 total)

SVE-43	SVE-65
SVE-44	SVE-67
SVE-45	SVE-68
SVE-47	SVE-70
SVE-48	SVE-71
SVE-49	SVE-74
SVE-51	SVE-75
SVE-55	SVE-76
SVE-56	SVE-80
SVE-57	SVE-82
SVE-58	SVE-83
SVE-59	SVE-84
SVE-60	SVE-85
SVE-63	SVE-86
SVE-64	SVE-87

Off-Site ISVE System

System was operational 620 out of 672 hours in January.
System monitoring was conducted on 1/24/06.
The next monitoring event is scheduled for 2/21/06.

Tables, Graphs & Figures
Table - Sampling Data
Graph - Mass Extraction
Graph - Total VOC Removal

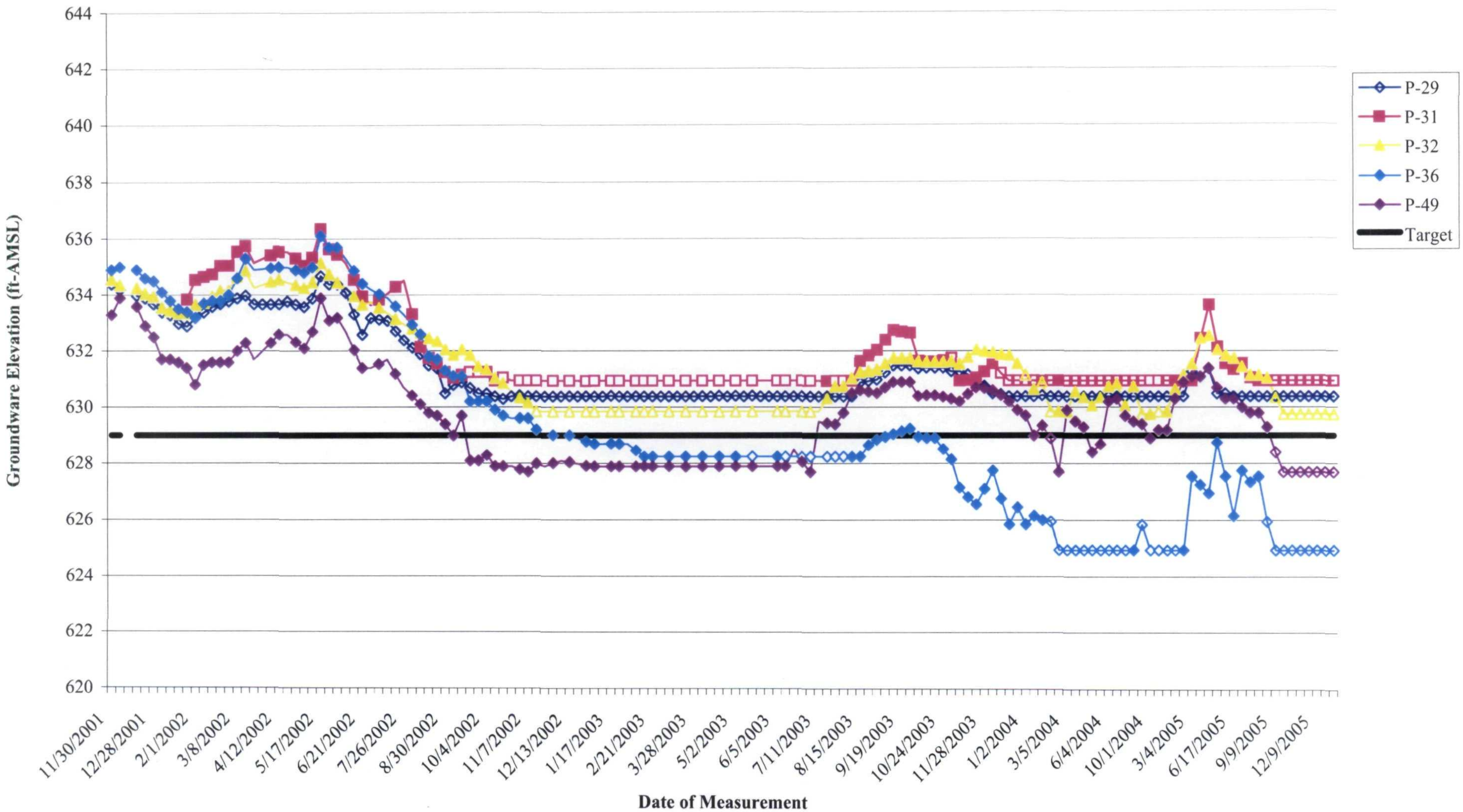
Active Wells (42 of 42 total)

SVE-01	SVE-22
SVE-02	SVE-23
SVE-03	SVE-24
SVE-04	SVE-25
SVE-05	SVE-26
SVE-06	SVE-27
SVE-07	SVE-28
SVE-08	SVE-29
SVE-09	SVE-30
SVE-10	SVE-31
SVE-11	SVE-32
SVE-12	SVE-33
SVE-13	SVE-34
SVE-14	SVE-35
SVE-15	SVE-36
SVE-16	SVE-37
SVE-17	SVE-38
SVE-18	SVE-39
SVE-19	SVE-40
SVE-20	SVE-41
SVE-21	SVE-42

Comments

Data presented here is for informational purposes only. Not all data presented in this report has been validated.

Figure 1
SBPA Water Level Status
ACS NPL Site
Griffith, Indiana



Note:
Hollow points represent dry piezometers (data used for graphing purposes only).
The bottom elevation of the piezometers may vary due to silting of the well or removal of silt.

ALC/jmf/CAD
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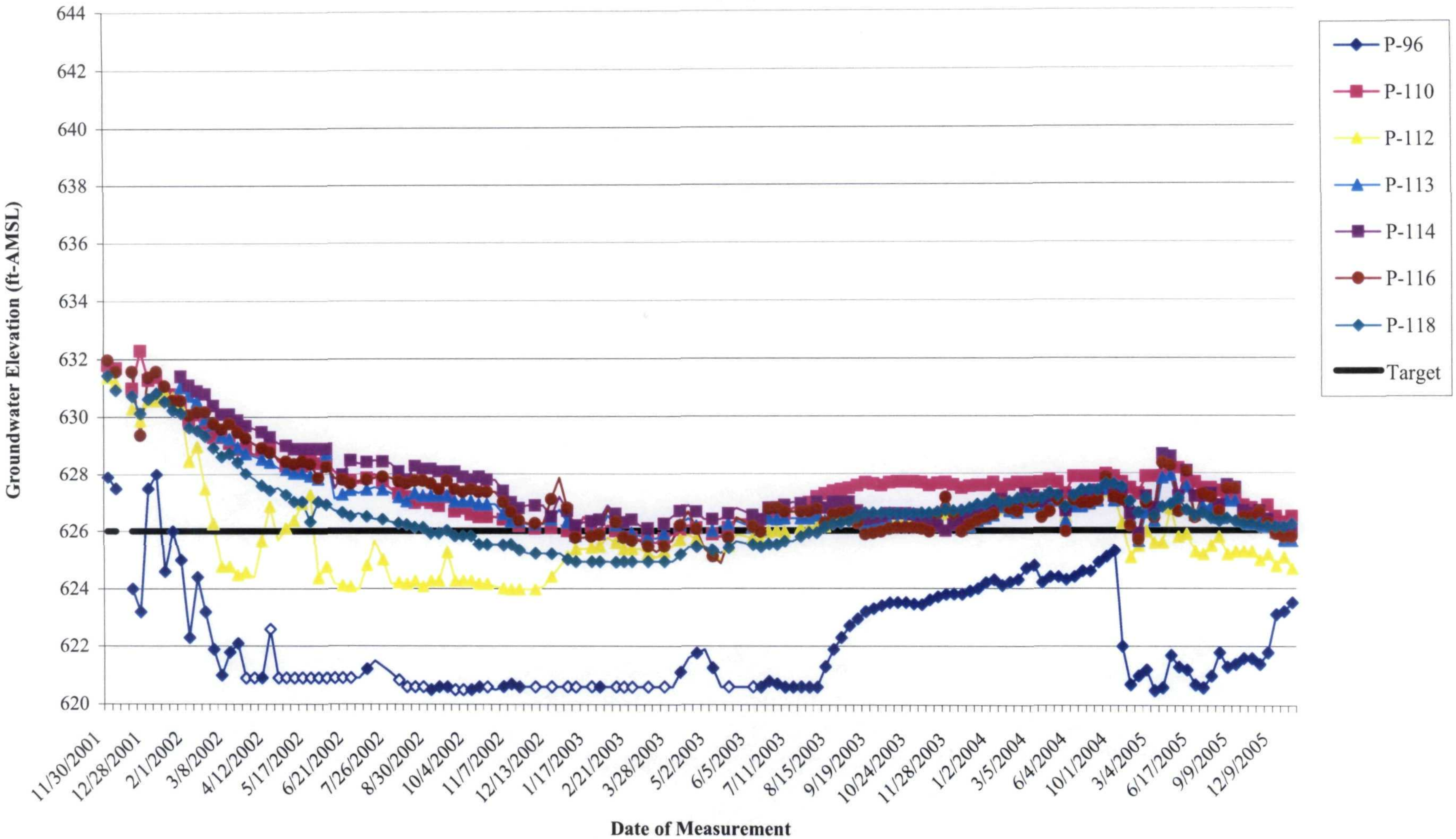
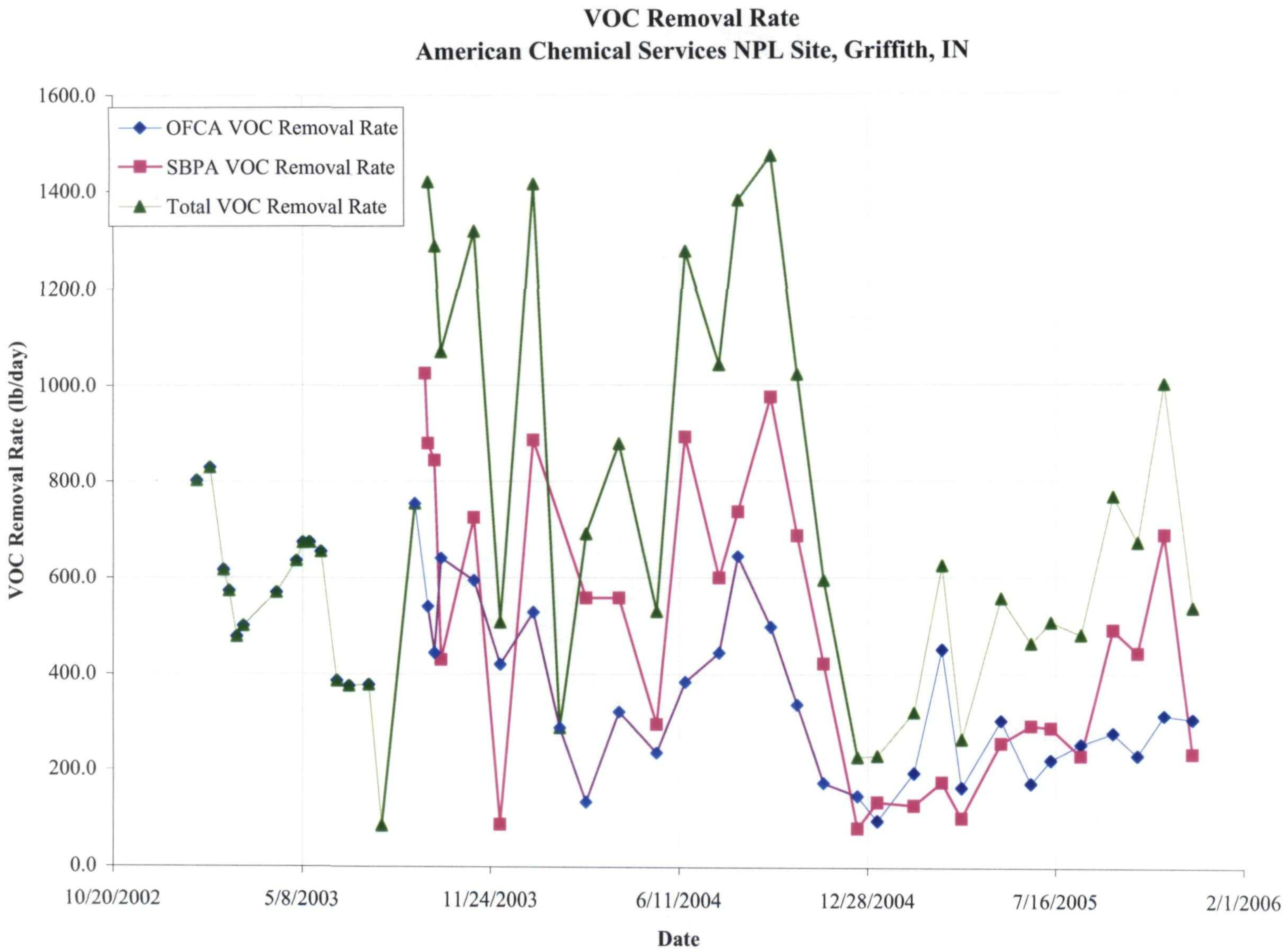
Figure 3
Off-Site Water Level Status - Piezometers
Groundwater Monitoring
ACS NPL Site
Griffith, Indiana



Note:
Hollow points represent dry piezometers
(data used for graphing purposes only). The bottom elevation of the piezometers may vary due to silting

ALC/jmf
J:/209/0603/0301/BWES and Dewatering Data/Water Levels.xls/Off-Site Chart



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Total VOCs Removed
American Chemical Services NPL Site, Griffith, IN

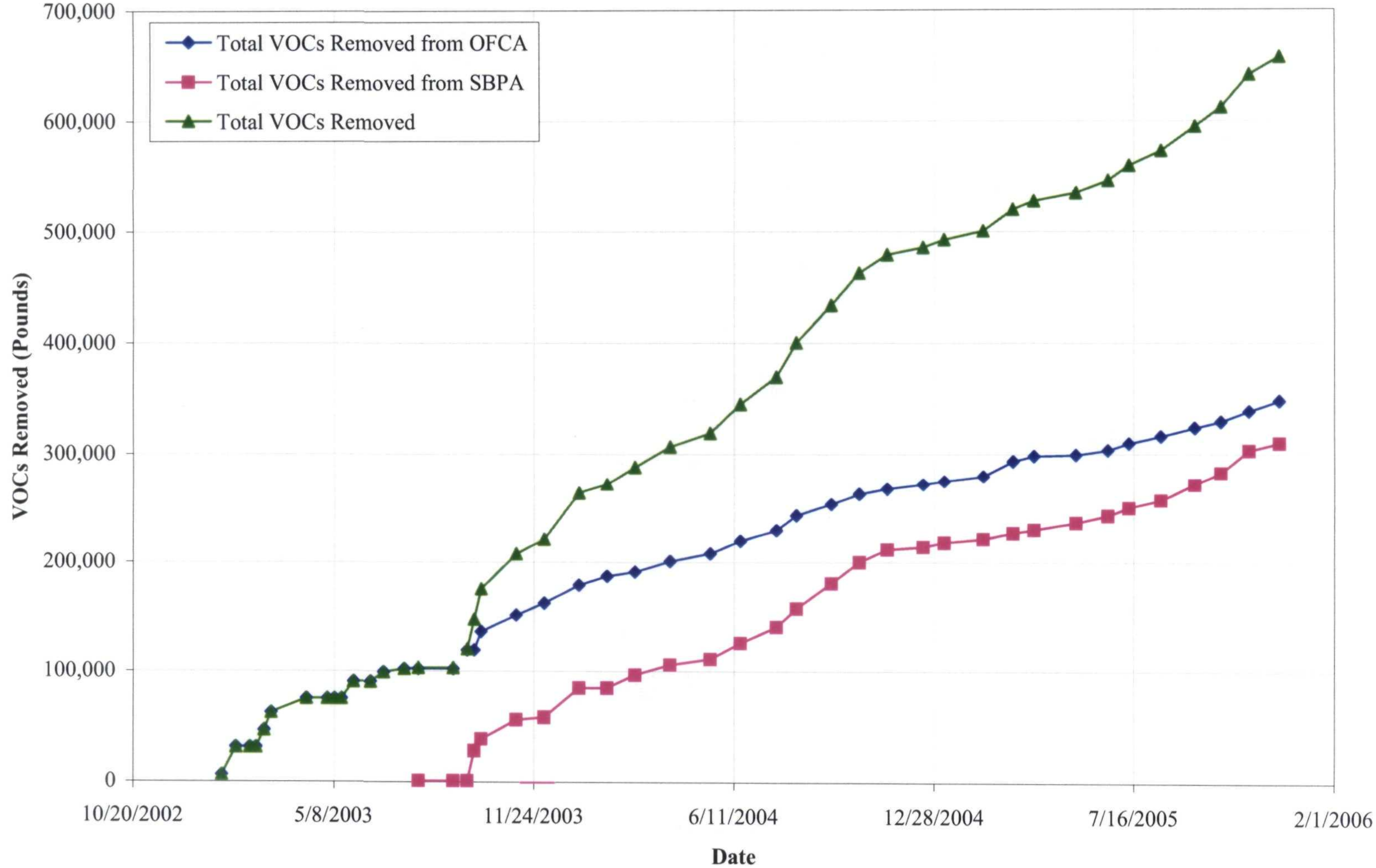

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Table 1
Thermal Oxidizer 1 Results for Method TO-14 (VOCs) - December 2005
American Chemical Service
Griffith, Indiana

		Sampled 12/8/05								
		Therm-Ox 1						Destruction Efficiency		
Compounds	Units	Influent		Influent Dup		Effluent		Low	High	Average
1,1,1-Trichloroethane	ppbv	45,000		45,000		29		99.94%	99.94%	99.94%
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U	1		NC	NC	NC
1,1,2-Trichloroethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
1,1-Dichloroethane	ppbv	5,100		5,200		12		99.76%	99.77%	99.77%
1,1-Dichloroethene	ppbv	430	J/J	430		120		NC	NC	NC
1,2-Dichloroethane	ppbv	430	J/J	430		ND	U	NC	NC	NC
1,2-Dichloropropane	ppbv	780		800		0.61	J/J	NC	NC	NC
2-Butanone (Methyl Ethyl Ketone)	ppbv	1,100	J/J	1,200	J/J	9.4		NC	NC	NC
2-Hexanone	ppbv	ND	U	ND	U	0.93	J/J	NC	NC	NC
4-Methyl-2-pentanone	ppbv	840	J/J	860	J/J	8.4		NC	NC	NC
Acetone	ppbv	3,800		3,700		96		97.41%	97.47%	97.44%
Benzene	ppbv	15,000		16,000		180		98.88%	98.80%	98.84%
Bromodichloromethane	ppbv	ND	U	ND	U	0.49	J/J	NC	NC	NC
Bromoform	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Bromomethane	ppbv	ND	U	ND	U	1		NC	NC	NC
Carbon Disulfide	ppbv	ND	U	120	J/J	0.66	J/J	NC	NC	NC
Carbon Tetrachloride	ppbv	ND	U	ND	U	0.93	J/J	NC	NC	NC
Chlorobenzene	ppbv	210	J/J	210	J/J	7.1		NC	NC	NC
Chloroethane	ppbv	850		880		12		98.59%	98.64%	98.61%
Chloroform	ppbv	6,400		6,500		4.9		99.92%	99.92%	99.92%
Chloromethane	ppbv	ND	U	ND	U	36		NC	NC	NC
cis-1,2-Dichloroethene	ppbv	64,000		65,000		240		99.63%	99.63%	99.63%
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U	1.7		NC	NC	NC
Dibromochloromethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Ethyl Benzene	ppbv	19,000		18,000		25		99.86%	99.87%	99.86%
m,p-Xylene	ppbv	110,000		110,000		130		99.88%	99.88%	99.88%
Methylene Chloride	ppbv	6,500		6,700		25		99.62%	99.63%	99.62%
o-Xylene	ppbv	65,000		65,000		53		99.92%	99.92%	99.92%
Styrene	ppbv	ND	U	ND	U	14		NC	NC	NC
Tetrachloroethene	ppbv	68,000		67,000		260		99.61%	99.62%	99.61%
Toluene	ppbv	140,000		140,000		160		99.89%	99.89%	99.89%
trans-1,2-Dichloroethene	ppbv	250.0	J/J	330	J/J	61		NC	NC	NC
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U	1.5		NC	NC	NC
Trichloroethene	ppbv	36,000		36,000		120		99.67%	99.67%	99.67%
Vinyl Chloride	ppbv	3,500		3,900		89		97.46%	97.72%	97.59%
Total	**ppbv**	**592,190**		**593,260**		**1,700.62**		**99.71%**	**99.71%**	**99.71%**
Total	**lb/hr**	**12.781**		**12.779**		**0.031**		**99.76%**	**99.76%**	**99.76%**

Notes:
NC - Not calculated
ND - Non-detect
NS - Not sampled
ppbv - parts per billion volume
lb/hr - pounds per hour
Therm-Ox 1 VOC lb/hr based on 1270 scfm, 76 (influent) and 139 (effluent) degrees Fahrenheit (12/8/05)
Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.
Destruction efficiencies were also not calculated if the effluent result exceeded either influent result

Qualifiers:
J - Result is estimated
U - below reported quantitation limit
_/ - Laboratory data qualifier
/_ - Data validation qualifier

Table 4
Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) - December 2005
American Chemical Service
Griffith, Indiana

		Sampled 12/8/05								
		Therm-Ox 1						Destruction Efficiency		
Compounds	**Units**	**Influent**		**Influent Dup**		**Effluent**		**Low**	**High**	**Average**
1,2,4-Trichlorobenzene	µg	ND	U	0.7	J/J	ND	U	NC	NC	NC
1,2-Dichlorobenzene	µg	36		33		ND	U	100.00%	100.00%	100.00%
1,3-Dichlorobenzene	µg	3.4		3		ND	U	100.00%	100.00%	100.00%
1,4-Dichlorobenzene	µg	9		8.5		ND	U	100.00%	100.00%	100.00%
2,4,5-Trichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4,6-Trichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dimethylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dinitrophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,6-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Chloronaphthalene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Chlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Methylnaphthalene	µg	8.5		8.5		ND	U	100.00%	100.00%	100.00%
2-Methylphenol (o-Cresol)	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Nitrophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
3,3'-Dichlorobenzidine	µg	ND	U	ND	U	ND	U	NC	NC	NC
3-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Bromophenyl-phenyl Ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chloro-3-methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chloroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chlorophenyl-phenyl Ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Methylphenol/3-Methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Nitrophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Acenaphthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Acenaphthylene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo(a)anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo(a)pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo(b)fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo(g,h,i)perylene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo(k)fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
bis(2-Chloroethoxy) Methane	µg	ND	U	ND	U	ND	U	NC	NC	NC
bis(2-Chloroethyl) Ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
bis(2-Ethylhexyl)phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Butylbenzylphthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Chrysene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dibenz(a,h)anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dibenzofuran	µg	ND	U	ND	U	ND	U	NC	NC	NC
Diethylphthalate	µg	ND	U	0.63	J/J	ND	U	NC	NC	NC
Dimethylphthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
di-n-Butylphthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Di-n-Octylphthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Fluorene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachlorobutadiene	µg	4.3		4.2		ND	U	100.00%	100.00%	100.00%
Hexachlorocyclopentadiene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachloroethane	µg	ND	U	ND	U	ND	U	NC	NC	NC
Indeno(1,2,3-c,d)pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Isophorone	µg	1.5		1.5		ND	U	100.00%	100.00%	100.00%
Naphthalene	µg	16		16		ND	U	100.00%	100.00%	100.00%
Nitrobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
N-Nitroso-di-n-propylamine	µg	ND	U	ND	U	ND	U	NC	NC	NC
N-Nitrosodiphenylamine	µg	ND	U	ND	U	ND	U	NC	NC	NC
Pentachlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Phenanthrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Phenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Total	µg	**78.70**		**76.03**		**0.00**		**100.00%**	**100.00%**	**100.00%**

Notes:
µg - Microgram
NC - Not calculated
ND - Non-detect

Qualifiers:
J - Result is estimated
U - Below reported quantitation limit
_/ - Laboratory data qualifier
/_ - Data validation qualifier

Table 2
Thermal Oxidizer 2 Results for Method TO-14 (VOCs) - December 2005
American Chemical Service
Griffith, Indiana

		Sampled 12/8/05								
		Therm-Ox 2						Destruction Efficiency		
Compounds	**Units**	**Influent**		**Influent Dup**		**Effluent**		**Low**	**High**	**Average**
1,1,1-Trichloroethane	ppbv	30,000		28,000		470		98.32%	98.43%	98.38%
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
1,1,2-Trichloroethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
1,1-Dichloroethane	ppbv	4,300		4,000		71		98.23%	98.35%	98.29%
1,1-Dichloroethene	ppbv	440		520		92.0		79.09%	82.31%	80.70%
1,2-Dichloroethane	ppbv	960		880		16.0		98.18%	98.33%	98.26%
1,2-Dichloropropane	ppbv	290	J/J	260	J/J	4.4	J/J	NC	NC	NC
2-Butanone (Methyl Ethyl Ketone)	ppbv	11,000		11,000		200		98.18%	98.18%	98.18%
2-Hexanone	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
4-Methyl-2-pentanone	ppbv	6,800		6,700		58.0		99.13%	99.15%	99.14%
Acetone	ppbv	14,000		13,000		480		96.31%	96.57%	96.44%
Benzene	ppbv	19,000		19,000		460		97.58%	97.58%	97.58%
Bromodichloromethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Bromoform	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Bromomethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Carbon Disulfide	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Carbon Tetrachloride	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Chlorobenzene	ppbv	ND	U	ND	U	2.9	J/J	NC	NC	NC
Chloroethane	ppbv	590		350	J/J	14		NC	NC	NC
Chloroform	ppbv	2,000		1,900		34.0		98.21%	98.30%	98.26%
Chloromethane	ppbv	ND	U	ND	U	9.0	J/J	NC	NC	NC
cis-1,2-Dichloroethene	ppbv	10,000		9,000		200		97.78%	98.00%	97.89%
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Dibromochloromethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Ethyl Benzene	ppbv	16,000		15,000		160		98.93%	99.00%	98.97%
m,p-Xylene	ppbv	66,000		62,000		610		99.02%	99.08%	99.05%
Methylene Chloride	ppbv	35,000		34,000		600.0		98.24%	98.29%	98.26%
o-Xylene	ppbv	26,000		24,000		250		98.96%	99.04%	99.00%
Styrene	ppbv	ND	U	ND	U	46		NC	NC	NC
Tetrachloroethene	ppbv	26,000		25,000		510		97.96%	98.04%	98.00%
Toluene	ppbv	110,000		100,000		1,400		98.60%	98.73%	98.66%
trans-1,2-Dichloroethene	ppbv	200.0	J/J	200	J/J	23.0	J/J	NC	NC	NC
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Trichloroethene	ppbv	19,000		18,000		330		98.17%	98.26%	98.21%
Vinyl Chloride	ppbv	1,800		1,700		59		96.72%	96.53%	96.63%
Total	**ppbv**	**399,380**		**374,510**		**6,099.3**		**98.37%**	**98.47%**	**98.42%**
Total	**lb/hr**	**11.885**		**11.150**		**0.152**		**98.64%**	**98.72%**	**98.68%**

Notes:
NC - Not calculated
ND - Non-detect
ppbv - parts per billion volume
lb/hr - pounds per hour

Qualifiers:
J - Result is estimated
U - below reported quantitation limit
_/ - Laboratory data qualifier
/_ - Data validation qualifier

Therm-Ox 2 VOC lb/hr based on 1827 scfm, 60 (influent) and 150(effluent) degrees Fahrenheit (12/8/05)
Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.
Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Table 5
Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) - December 2005
American Chemical Service
Griffith, Indiana

		Sampled 12/8/05								
		Therm-Ox 2						Destruction Efficiency		
Compounds	**Units**	**Influent**		**Influent Dup**		**Effluent**		**Low**	**High**	**Average**
1,2,4-Trichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
1,2-Dichlorobenzene	µg	9.5		14		1.2		100.00%	100.00%	100.00%
1,3-Dichlorobenzene	µg	ND	U	0.53	J/J	ND	U	NC	NC	NC
1,4-Dichlorobenzene	µg	1.3		1.7		ND	U	100.00%	100.00%	100.00%
2,4,5-Trichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4,6-Trichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dimethylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dinitrophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,6-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Chloronaphthalene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Chlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Methylnaphthalene	µg	1		1.3		ND	U	100.00%	100.00%	100.00%
2-Methylphenol (o-Cresol)	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Nitrophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
3,3'-Dichlorobenzidine	µg	ND	U	ND	U	ND	U	NC	NC	NC
3-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Bromophenyl-phenyl Ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chloro-3-methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chloroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chlorophenyl-phenyl Ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Methylphenol/3-Methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Nitrophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Acenaphthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Acenaphthylene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo(a)anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo(a)pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo(b)fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo(g,h,i)perylene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo(k)fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
bis(2-Chloroethoxy) Methane	µg	ND	U	ND	U	ND	U	NC	NC	NC
bis(2-Chloroethyl) Ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
bis(2-Ethylhexyl)phthalate	µg	ND	U	ND	U	1.6	J/J	NC	NC	NC
Butylbenzylphthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Chrysene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dibenz(a,h)anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dibenzofuran	µg	ND	U	ND	U	ND	U	NC	NC	NC
Diethylphthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dimethylphthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
di-n-Butylphthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Di-n-Octylphthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Fluorene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachlorobutadiene	µg	0.64	J/J	0.85	J/J	ND	U	NC	NC	NC
Hexachlorocyclopentadiene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachloroethane	µg	ND	U	ND	U	ND	U	NC	NC	NC
Indeno(1,2,3-c,d)pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Isophorone	µg	2.6		4.5		ND	U	100.00%	100.00%	100.00%
Naphthalene	µg	5.8		7.6		2.1		63.79%	72.37%	68.08%
Nitrobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
N-Nitroso-di-n-propylamine	µg	ND	U	ND	U	ND	U	NC	NC	NC
N-Nitrosodiphenylamine	µg	ND	U	ND	U	ND	U	NC	NC	NC
Pentachlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Phenanthrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Phenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Total	µg	**20.84**		**30.48**		**4.90**		**76.49%**	**83.92%**	**80.21%**

Notes:
µg - Microgram
NC - Not calculated
ND - Non-detect

Qualifiers:
J - Result is estimated
U - Below reported quantitation limit
_/ - Laboratory data qualifier
/_ - Data validation qualifier

Table 3
SBPA and Off-Site ISVE System Results
for Method TO-14 (VOCs) - December 2005
American Chemical Service
Griffith, Indiana

		Sampled 12/8/2005			
Compounds	**Units**	**SBPA ISVE**		**Off-Site ISVE**	
1,1,1-Trichloroethane	ppbv	34,000		32,000	
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U
1,1,2-Trichloroethane	ppbv	ND	U	ND	U
1,1-Dichloroethane	ppbv	3,800		4,000	
1,1-Dichloroethene	ppbv	310	J/J	ND	U
1,2-Dichloroethane	ppbv	310	J/J	1,000	
1,2-Dichloropropane	ppbv	630		300	J/J
2-Butanone (Methyl Ethyl Ketone)	ppbv	840	J/J	12,000	
2-Hexanone	ppbv	ND	U	250	J/J
4-Methyl-2-pentanone	ppbv	600	J/J	8,000	
Acetone	ppbv	3,000		16,000	
Benzene	ppbv	11,000		19,000	
Bromodichloromethane	ppbv	ND	U	ND	U
Bromoform	ppbv	ND	U	ND	U
Bromomethane	ppbv	ND	U	ND	U
Carbon Disulfide	ppbv	ND	U	ND	U
Carbon Tetrachloride	ppbv	ND	U	ND	U
Chlorobenzene	ppbv	ND	U	ND	U
Chloroethane	ppbv	650		ND	U
Chloroform	ppbv	4,600		2,200	
Chloromethane	ppbv	ND	U	ND	U
cis-1,2-Dichloroethene	ppbv	48,000		4,000	
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U
Dibromochloromethane	ppbv	ND	U	ND	U
Ethyl Benzene	ppbv	14,000		19,000	
m,p-Xylene	ppbv	82,000		79,000	
Methylene Chloride	ppbv	4,900		38,000	
o-Xylene	ppbv	47,000		32,000	
Styrene	ppbv	ND	U	ND	U
Tetrachloroethene	ppbv	50,000		28,000	
Toluene	ppbv	110,000		110,000	
trans-1,2-Dichloroethene	ppbv	240	J/J	ND	U
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U
Trichloroethene	ppbv	27,000		20,000	
Vinyl Chloride	ppbv	2,600		300	J/J
Total	**ppbv**	**445,480**		**425,050**	
Total	**lb/hr**	**9.661**		**12.668**	

Notes:
NC - Not calculated
ND - Non-detect
ppbv - parts per billion volume
lb/hr - pounds per hour

Qualifiers:
J - Result is estimated
U - below reported quantitation limit
_/ - Laboratory data qualifier
/_ - Data validation qualifier

12/8/05 VOCs in lb/hr calculated based on Offsite: 1827 scfm, 62 degrees Fahrenheit (12/8/05)
On-site: 1270 scfm, 72 degrees Fahrenheit (12/8/05)

LRH/ALC
J:\209\0603 ACS\0301 GWTP\Cat-Ox Therm-Ox Sampling\2005\4th Qtr 2005\File\TO-14 ISVE

Table 6
SBPA and Off-Site ISVE System Results
for Method TO-13 (SVOCs) - December 2005
American Chemical Service
Griffith, Indiana

		Sampled 12/8/2005			
Compounds	**Units**	**SBPA ISVE**		**Off-Site ISVE**	
1,2,4-Trichlorobenzene	µg	0.56	J/J	1.8	
1,2-Dichlorobenzene	µg	67		47	
1,3-Dichlorobenzene	µg	6.8		1.5	
1,4-Dichlorobenzene	µg	17		5.6	
2,4,5-Trichlorophenol	µg	ND	U	ND	U
2,4,6-Trichlorophenol	µg	ND	U	ND	U
2,4-Dichlorophenol	µg	ND	U	ND	U
2,4-Dimethylphenol	µg	ND	U	ND	U
2,4-Dinitrophenol	µg	ND	U	ND	U
2,4-Dinitrotoluene	µg	ND	U	ND	U
2,6-Dinitrotoluene	µg	ND	U	ND	U
2-Chloronaphthalene	µg	ND	U	ND	U
2-Chlorophenol	µg	ND	U	ND	U
2-Methylnaphthalene	µg	15		12	
2-Methylphenol (o-Cresol)	µg	ND	U	ND	U
2-Nitroaniline	µg	ND	U	ND	U
2-Nitrophenol	µg	ND	U	ND	U
3,3'-Dichlorobenzidine	µg	ND	U	ND	U
3-Nitroaniline	µg	ND	U	ND	U
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U
4-Bromophenyl-phenyl Ether	µg	ND	U	ND	U
4-Chloro-3-methylphenol	µg	ND	U	ND	U
4-Chloroaniline	µg	ND	U	ND	U
4-Chlorophenyl-phenyl Ether	µg	ND	U	ND	U
4-Methylphenol/3-Methylphenol	µg	ND	U	ND	U
4-Nitroaniline	µg	ND	U	ND	U
4-Nitrophenol	µg	ND	U	ND	U
Acenaphthene	µg	ND	U	ND	U
Acenaphthylene	µg	ND	U	ND	U
Anthracene	µg	ND	U	ND	U
Benzo(a)anthracene	µg	ND	U	ND	U
Benzo(a)pyrene	µg	ND	U	ND	U
Benzo(b)fluoranthene	µg	ND	U	ND	U
Benzo(g,h,i)perylene	µg	ND	U	ND	U
Benzo(k)fluoranthene	µg	ND	U	ND	U
bis(2-Chloroethoxy) Methane	µg	ND	U	ND	U
bis(2-Chloroethyl) Ether	µg	ND	U	ND	U
bis(2-Ethylhexyl)phthalate	µg	ND	U	ND	U
Butylbenzylphthalate	µg	ND	U	ND	U
Chrysene	µg	ND	U	ND	U
Dibenz(a,h)anthracene	µg	ND	U	ND	U
Dibenzofuran	µg	ND	U	ND	U
Diethylphthalate	µg	ND	U	ND	U
Dimethylphthalate	µg	ND	U	ND	U
di-n-Butylphthalate	µg	ND	U	ND	U
Di-n-Octylphthalate	µg	ND	U	ND	U
Fluoranthene	µg	ND	U	ND	U
Fluorene	µg	ND	U	ND	U
Hexachlorobenzene	µg	ND	U	ND	U
Hexachlorobutadiene	µg	9		5.2	
Hexachlorocyclopentadiene	µg	ND	U	1	J/J
Hexachloroethane	µg	ND	U	ND	U
Indeno(1,2,3-c,d)pyrene	µg	ND	U	ND	U
Isophorone	µg	3.5		29	
Naphthalene	µg	30		58	
Nitrobenzene	µg	ND	U	ND	U
N-Nitroso-di-n-propylamine	µg	ND	U	ND	U
N-Nitrosodiphenylamine	µg	ND	U	ND	U
Pentachlorophenol	µg	ND	U	ND	U
Phenanthrene	µg	ND	U	ND	U
Phenol	µg	3.8	J/J	3.8	J/J
Pyrene	µg	ND	U	ND	U
Total	µg	**152.66**		**164.90**	

Notes:
µg - Microgram
NC - Not calculated
ND - Non-detect

Qualifiers:
J - Result is estimated
U - below reported quantitation limit
_/ - Laboratory data qualifier
/_ - Data validation qualifier

9 Jan 06 Mon

0905 Arrive onsite - overcast
Calm cold 37°F
Personnel on site
Rich Marzlen BCS
Larry Jaras BCS
Amy Clore MWH
Lee Oresz MWH
Tim Kirkland Austgen
Larry Campbell BUSPC

0910 Disc w/ Amy Clore - she is adjusting flow of input air to SBPA to limit flow to 100 cfm.

0930 Disc w/ Lee Oresz. Plant has been running well in December since major OEM in mid Nov. Do have water leak in thermal scrubber. Will shut down ~~plant~~ thermal tonight to remove 18" elbow + have it welded by Vitamas on Wed.

1000 Photo 82-04 looking NW at Amy taking/recording pressure readings at SBPA SVE Inj. System

LM Campbell

1005 Photo 82-05 looking W showing vapor exhaust from thermox 1 & 2

1010 Photo 82-06 looking SW at leaking inlet elbow on thermox 1

1011 Photo 82-07 looking down at floor showing water leaking from thermox 1

1014 Photo 82-08 looking N at Tanker truck of Sodium Hydroxide

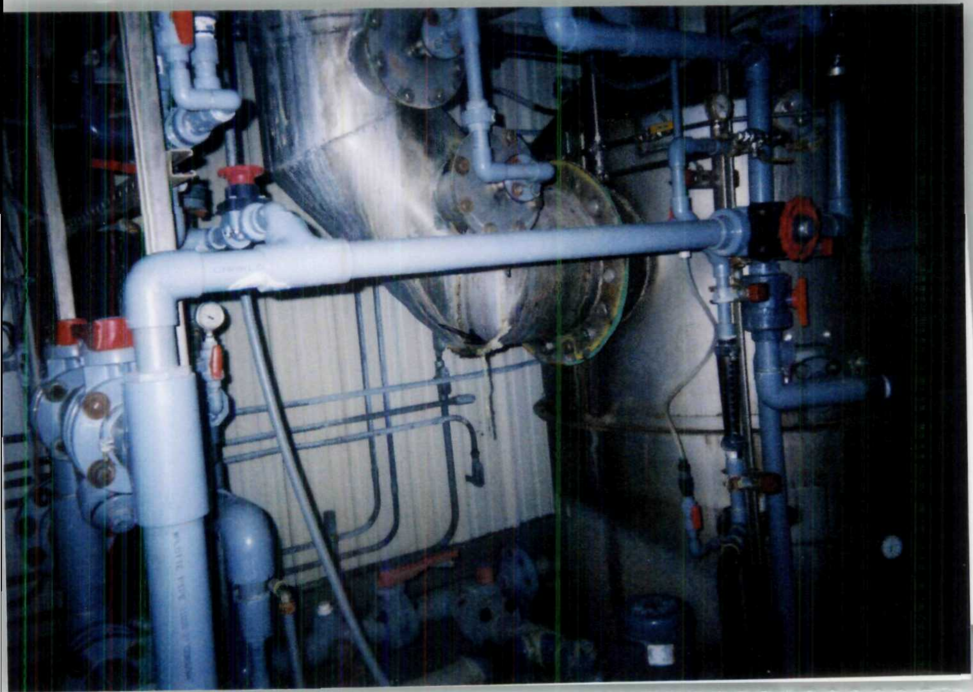
1015 Photo 82-09 looking SW at Tanker driver loading Sodium Hydroxide into storage tank in GWTP

1025 Left site for day

LM Campbell

Site: American Chemical Service, Inc.
Proj. #: 44728 AES [46526 RAC]
Roll: 82 Photo #4
Date: 01-09-06 Time: 1000
Photographer: Larry Campbell
Description: Photo facing northwest showing Amy Clore taking and recording pressure readings of SBPA ISVE air injection system in ISVE blower shed. Note use of respirator.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES [46526 RAC]
Roll: 82 Photo #5
Date: 01-09-06 Time: 1005
Photographer: Larry Campbell
Description: Photo facing west showing vapor exhaust from thermox 1 and 2.



Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 82 Photo #6
Date: 01-09-06 Time: 1010
Photographer: Larry Campbell
Description: Photo facing southwest at leaking 90° elbow (arrow) for influent into thermox 1.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 82 Photo #7
Date: 01-09-06 Time: 1011
Photographer: Larry Campbell
Description: Photo facing down at floor showing leaking water from thermox 1.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 82 Photo #8
Date: 01-09-06 Time: 1014
Photographer: Larry Campbell
Description: Photo facing north showing tanker truck of sodium hydroxide filling tank in GWTP.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 82 Photo #9
Date: 01-09-06 Time: 1015
Photographer: Larry Campbell
Description: Photo facing southwest showing tanker driver unloading sodium hydroxide into tank in GWTP. [NOTE: Photo did not develop]